AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-331

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-331.01
PCSat (NO-44) Operational

AMSAT News Service Bulletin 331.01
 From AMSAT HQ SILVER SPRING, MD.
November 27, 2005
To All RADIO AMATEURS
BID: $ANS-331.01

PCsat (NO-44) Will be OPS NORMAL for 2 weeks starting 25 November 2005. PCsat was last operating OPS-NORMAL back in Jan/Feb 2005 for about a month until it returned to negative-power-budget mode on 16 Feb 2005. PCsat enters full sun every 2 months or so, but the energy budget is only high enough during the winter months for full receovery due to the better sun angles then on its +Z solar panel.

PCsat is using the same path as ARISS for convenience:
UNPROTO APRS VIA ARISS.

APRS mobiles in the USA will also see occasional packets from the Side B downlink on the USA APRS frequency of 144.39.

Please remember the rules for PCsat as published in the User Service Agreement, and that is "no unattended beacons via PCsat" to conserve power for those people trying live contacts.

[ANS thanks Bob WB4APR for the above information]

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SB SAT @ AMSAT $ANS-331.02
PCSat2 Awaiting Improved Sun Angles

AMSAT News Service Bulletin 331.02
From AMSAT HQ SILVER SPRING, MD.
November 27, 2005
To All RADIO AMATEURS
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PCSAT2 shut down due to low voltage sometime after 1855z on 23 Nov due to high beta angle. Nothing was heard on the 2032z pass.

PCSAT2 is attached to the outside of ISS and only gets sun when ISS is maintaining an attitude with good sun angle on our location. The worst angle is on Saturday, 26 November 2005. Recovery is not expected until later next week when sun angles begin to impr ove.Atthattimeitis hoped that joint ops with PCsat (NO-44) will be possible.

Last telemetry was showing the 16 volt Lithimu-Ion Battery down to 11.6 volts. Load current was the usual 313 mA and Solar current was 377 mA near local noon. Even with load sheding, and re-charge, the PCSat2 receivers will be on and the only power savings due to the shut-down will be the 60 mA of the TNC's. This is only 20% of the nominal load current and is insufficient to gain much ground until the entire system returns to better sun angles sometime after 1 Dec.

[ANS thanks Bob, WB4APR, for the above information]

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SB SAT @ AMSAT $ANS-331.03
SuitSat Deployment Delay

AMSAT News Service Bulletin 331.03
From AMSAT HQ SILVER SPRING, MD.
November 27, 2005
To All RADIO AMATEURS
BID: $ANS-331.03

Frank Bauer, KA3HDO, AMSAT V.P. for Human Spaceflight reports that he has received information that the Russian EVA that will deploy SuitSat, which had been planned for December 8, has been delayed to late January/Early
February.

[ANS thanks Frank KA3HDO for the above information]

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SB SAT @ AMSAT $ANS-331.04
SA AMSAT Satellite Conference 2006 - Call For Papers

AMSAT News Service Bulletin 331.04
From AMSAT HQ SILVER SPRING, MD.
November 27, 2005
To All RADIO AMATEURS
BID: $ANS-331.04

CALL FOR PAPERS FOR THE SA AMSAT SATELLITE CONFERENCE 2006
(SA AMSATCON2006)

The Southern Africa Amateur Radio Satellite Association (SA AMSAT) will be holding its annual satellite conference on 25 March 2006 at the University of KwaZulu-Natal. The key note speaker will be Prof Justin Jonas who will deliver a presentation on the SKA (Square

kilometre Array) project. Prof Takawira, head of the Department of Electrical and Electronic Engineering will open the conference.

SA AMSAT is calling for proposals for papers on subjects covering the various aspects of satellite and weak signal communication including equipment and antenna design and construction.

Prospective authors should send a brief synopsis of their proposed paper to saamsat@intekom.co.za for consideration by the conference committee. The deadline is 30 January 2006. Proposals and submission may also be mailed to SA AMSAT, PO Box 90438, Garsfontein 0042.

Authors will be advised by 6 February 2006 of acceptance of their papers. Final papers in Microsoft word format are required by 10 March 2006.

The morning sessions will be focussing on technologies while the afternoon sessions will include practical aspects of satellite communication for both experienced satellite enthusiast as well as newcomers.

Attendance to the conference is open to all satellite enthusiasts. Details of registration and fees will be announced during January 2006.

[ANS thanks JoAnne, WB9JEJ, for the above information]

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SB SAT @ AMSAT $ANS-331.05
POSAT Update

AMSAT News Service Bulletin 331.05
From AMSAT HQ SILVER SPRING, MD.
November 27, 2005
To All RADIO AMATEURS
BID: $ANS-331.05

During the AMSAT-UK Colloquium in late July it was announced that it was expected that the POSAT satellite would be reconfigured for amateur radio use.

We are pleased to confirm that this is still the plan but it is taking a little longer than expected to make the necessary non-technical arrangements.

The final operating configurations will take into account the various options discussed on the AMSAT-BB within the constraints imposed by the operating system on board and by the load on the command station.

As soon as we have more detailed information we will make a further announcement

73 Jim Heck, G3WGM
Hon Sec AMSAT-UK

[ANS thanks Jim, G3WGM, for the above information]

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SB SAT @ AMSAT $ANS-331.06
OSCAR 11 Report - 21 November 2005

AMSAT News Service Bulletin 331.06
 From AMSAT HQ SILVER SPRING, MD.
November 27, 2005
To All RADIO AMATEURS
BID: $ANS-331.06

During the period 20 October to 21 November 2005 the VHF beacon on 145.826 MHz. resumed transmissions on 21 October, and continued until 30 October. Transmissions then resumed, as expected, on 10 November. However, the beacon stopped transmitting prematurely, some time between 14 and 16 November. If the watchdog resets as expected, then the beacon should restart around 06 December.

Signals have been very variable during this period. Sometimes received at good strength, at other times they were inaudible , even with the BFO switched ON (ie. in CW mode).

The on-board clock continues to show a very large error. Currently it is 19.9 days slow.

All the analogue telemetry channels, 0 to 59 are zero, ie they have failed. The status channels 60 to 67 are still working.

The eclipses have now ended, and the satellite should be in continuous sunlight for the remainder of this year, and next year until early May. This should help the satellite to continue transmitting, although continuous sunlight can cause problems due to excessive temperatures. Power supply problems can be caused by poor earth pointing attitude, ie the sunlight illuminating the ends of the satellite, instead of the solar arrays.

The watchdog timer appears to be operating on the 20 day cycle, ie. approximately ten days ON followed by 10 days OFF. It appears to be unaffected by problems of the on-board clock. However, poor solar attitude, and battery problems, may be combining to produce a low 14 volt line supply. This appears to be causing the beacon to switch OFF prematurely, and resets the watchdog timer cycle. It seems very likely that the battery is now unable to retain its charge, due to having endured around 100,000 partial charge/discharge cycles, always a problem with NiCad cells. When analogue telemetry was transmitted, it showed an unexplained current drain from the 14 volt line. This just adds to the present problems.

The Beacon frequencies are -
VHF 145.826 MHz. AFSK FM ASCII Telemetry
UHF 435.025 MHz. OFF
S-band 2401.5 MHz. OFF

Listeners to OSCAR-11 may be interested in visiting my website which contains an archive of news & telemetry data. It also contains details about using a soundcard or hardware demodulators for data capture. There is software for capturing data, and decoding ASCII telemetry. The URL is www.users.zetnet.co.uk/clivew/

If you place this bulletin on a terrestrial packet network, please use the bulletin identifier $BID:U2RPT115.CWV, to prevent duplication.

[ANS thanks Clive G3CWV for the above information]

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SB SAT @ AMSAT $ANS-331.07

AMSAT Awards

AMSAT News Service Bulletin 331.07
From AMSAT HQ SILVER SPRING, MD.
November 27, 2005
To All RADIO AMATEURS
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This week, congratulations go out to all of the following.

Sebastiano Trovato, IW9HBY, Satellite Communications Achievement Award #425
Jonathan Poulton, W0CK, Satellite Communications Achievement Award #426

Keith Austermiller, KB9STR, 51 on 51 Award #42
Brock Thomsen, W6GMT, 51 on 51 Award #43
Mike Herr, WA6ARA, 51 on 51 Award #44

To see all the awards visit http://www.amsat.org or
http://www.amsatnet.com

[ANS thanks Bruce KK5DO, for the above information]

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SB SAT @ AMSAT $ANS-331.08
ARISS Status - 21 November 2005

AMSAT News Service Bulletin 331.08
From AMSAT HQ SILVER SPRING, MD.
November 27, 2005
To All RADIO AMATEURS
BID: $ANS-331.08

1. Hermann Middle School Contact Successful

On Wednesday, 16 November 2005, Hermann Middle School, in Hermann, Missouri, contacted the ISS via ham radio. The school library was standing room only, as seven students asked questions of Bill McArthur, KC5ACR. The audio was distributed over the PA system to the rest of the school. MSNBC carried the event live through the school's Hermann Bearcat Amateur Radio Club webcam. Two television stations, channel 5, St. Louis and channel 13, Jefferson City, covered the event and ran video clips in their news casts. The students, volunteers and teachers who participated will receive DVDs as a remembrance of the event. The Hermann Middle School radio contact coordinator reported, "This was a wonderful thing that happened to our rural school district. They are all smiles right now."

2. Takatsuki Education Center Contact Successful

On Thursday, 17 November 2005, Takatsuki Education Center in Takatsuki, Osaka, Japan, experienced a successful contact with the ISS. Ten sixth graders from Hiyoshidai Elementary School posed twenty questions to Bill McArthur, KC5ACR, as an audience of approximately 400 students, parents and others gathered to watch the event. Two television stations, including NHK (Japan Broadcasting Corporation), three newspapers, and other media covered the contact. The contact audio is available at: http://jk1zrw.dyndns.org/takatsuki.html.en

For the video, see:

http://www.city.takatsuki.osaka.jp/multimedia/media/ariss-hiyosidai.asf

3. ARRL Article on Negri and Furtherwick School Contacts

ARRL ran an article covering the Instituto Comprensivo Francesco Negri and Furtherwick Park School contacts. "Students in Italy, England Entertained, Educated via Ham Radio" may be found at: http://www.arrl.org/news/stories/2005/11/16/1/?nc=1

4.Italian School Contact Video

On Wednesday, November 9, students from Instituto Comprensivo Francesco Negri spoke with astronaut Bill McArthur via amateur radio. Radio operator Claudio Ariotti, IK1SLD, posted a video clip and photos of the event on the following website: http://scuola.spaceonline.tv/

5. Furtherwick Park School Contact

On Wednesday, November 9, Furtherwick Park School successfully contacted the ISS. The BBC covered the event in an article, "Pupils link up with International Space Station." See: http://www.bbc.co.uk/essex/content/articles/2005/11/11/space_station_feature.shtml

ARISS member, Howard Long has made available a video of the contact. See: http://www.howardlong.com/images/Furtherwick.wmv

6. Russian EVA to Deploy SuitSat Postponed

SuitSat, a Russian spacesuit containing ham radio equipment and a CD of student artwork, was scheduled to be deployed during a Russian EVA on December 8. This EVA has been postponed and is not expected to take place until late January/early February 2006.

This unique satellite continues to receive news coverage, as Frank Bauer's SuitSat paper has been translated into French and posted on the AMSAT-France website. See: http://www.amsat-france.org/ariss

[ANS thanks Carol, KB3LKI for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Lee McLamb, KU4OS
ku4os at amsat dot org